

# **EXHIBIT 34**

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

TQ DELTA, LLC, )  
)  
Plaintiff, )  
) C.A. No. 14-954-RGA  
v. )  
)  
ADTRAN, INC., )  
)  
Defendant. )

J. Caleb Boggs Courthouse  
844 North King Street  
Wilmington, Delaware

Thursday, March 18, 2021  
9:05 a.m.  
Markman Hearing  
Videoconference

BEFORE: THE HONORABLE RICHARD G. ANDREWS, U.S.D.C.J.

APPEARANCES:

FARNAN LLP  
BY: BRIAN E. FARNAN, ESQUIRE

-and-

McANDREWS HELD & MALLOY  
BY: PETER J. McANDREWS, ESQUIRE  
BY: ASHLEY RATYCZ, ESQUIRE  
BY: RAJENDRA A. CHIPLUNKAR, ESQUIRE

For the Plaintiff

1 additional shift that's applied pseudo randomly to scramble  
2 the phases. And the original phase, which is also a phase  
3 shift off of the baseline sign wave that is unshifted,  
4 that's also a shift. In fact, the fundamental type of  
5 modulation here is called phase shift keying, PSK. So it is  
6 a shift, but it's a shift with respect to a baseline  
7 unshifted sign wave.

8 And then the phase shift of the claim actually  
9 applies a further shift to scramble the phases before  
10 it's --

11 THE COURT: So for your unshifted sign wave, and  
12 this may sound like a very stupid question because it may,  
13 in fact, be a very stupid question, how many phase  
14 characteristics could there be?

15 MR. McANDREWS: I guess, Your Honor, depending  
16 on granularity, but infinite. But if we want to make the  
17 granularity one degree, for example, then there are 360  
18 possible phase shifts with respect to the original unshifted  
19 sign wave.

20 THE COURT: And so does that mean there's nearly  
21 an infinite number of phase characteristics?

22 MR. McANDREWS: There could be, but not in a  
23 known system, Your Honor. In a known system, of course,  
24 that's limited by --

25 THE COURT: So when you say "known system," you

1 we're on the technical point, and maybe I'll cover the  
2 waiver argument last. But on the technical point here, so  
3 the competing constructions, and as Your Honor pointed out  
4 is our construction is more about stating what is not  
5 required of a phase characteristic because there's --

6 THE COURT: And so, Mr. McAndrews, let me just  
7 interrupt for a second because essentially your construction  
8 is really just the first phrase, one or more values that  
9 corresponds to a particular phase of a carrier signal;  
10 right? The rest is just argument as to why ADTRAN is wrong?

11 MR. McANDREWS: That's right, although it's the  
12 clarification that the values are not required to be in any  
13 particular nomenclature format.

14 THE COURT: Well, so let me ask you about that,  
15 which is what are some of the formats that the values could  
16 be in?

17 MR. McANDREWS: Yes, Your Honor. Our expert  
18 addressed that, and it was something that their expert did  
19 not respond to. Dr. Madisetti explained and here it's  
20 highlighted. This is on slide 15. Dr. Madisetti explained  
21 that there are numerous ways that one skilled in the art  
22 would understand that a phase characteristic can be  
23 expressed.

24 One way is simply the decimal or binary values  
25 of the bit to be communicated on a particular carrier

1 (Everybody said, Thank you, Your Honor.)

2 (Markman Hearing Videoconference was concluded

3 at 10:37 a.m.)

4 I hereby certify the foregoing is a true and

5 accurate transcript from my stenographic notes in the

6 proceeding.

7 /s/ Heather M. Triozzi

8 Certified Merit and Real-Time Reporter

9 U.S. District Court

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